

# SAC3034AQ3



GaAs MMIC Low Noise Amplifier  
3.5~6GHz

Rev 1.0

## Features

- Frequency: 3.5~6GHz
- Gain: 21dB
- Noise Figure: 1.3dB Typ., 1.8dB Max.
- OP<sub>-1dB</sub>: 18dBm
- Supply Voltage: +5V@65mA
- Package Size: 3mmx3mmx1.1mm

## Typical Applications

- Radar and ECM
- RF/ Microwave radio
- Military and Space
- Test and Measurement

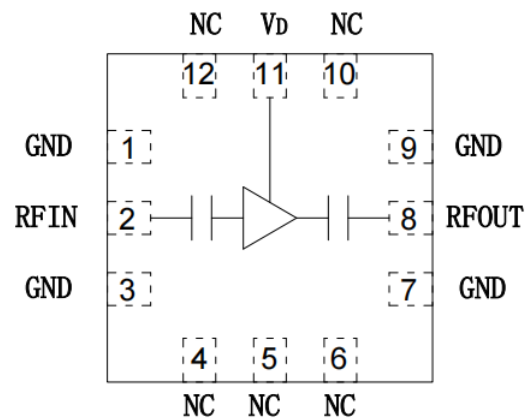
## General Description

SAC3034AQ3 is a GaAs MMIC Low Noise Amplifier in QFN surface mount package, which operates between in 3.5~6GHz.

The amplifier can provide 21dB of gain, 18dBm of output P<sub>-1dB</sub> and 1.3dB noise figure and from a 65mA supply current.

SAC3034AQ3 is assembled in a 3mm x 3mm QFN plastic package.

## Functional Diagram



## Electrical Performance ( TA=25°C, VD= +5V, ID=65mA, Z0=50Ω )

Parameter	Min.	Typ.	Max.	Units
Frequency Range	3.5~6			GHz
Gain	17	21	25	dB
Gain Flatness	—	±1	±1.5	dB
Input/Output VSWR	—	1.5	2.0	:1
Noise Figure	—	1.3	1.8	dB
Reserve Isolation	—	-35	—	dB
Output Power for 1 dB Compression (OP <sub>-1dB</sub> )	16.5	18	—	dBm
Output Third Order Intercept (OIP <sub>3</sub> )	—	32*	—	dBm
Supply Current(I <sub>D</sub> )	—	65	80	mA

\*Pin/Tone=-15dBm,fc=3GHz, Δf=1MHz

## Absolute Maximum Ratings

Maximum Input Power	+17dBm,CW 30s	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C
Supply Voltage	+7V		

## SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA  
Tel: 1-847-505-8319, 1-847-573-9866  
E-mail: sales@superapexco.com  
Website: www.superapexco.com

# SAC3034AQ3

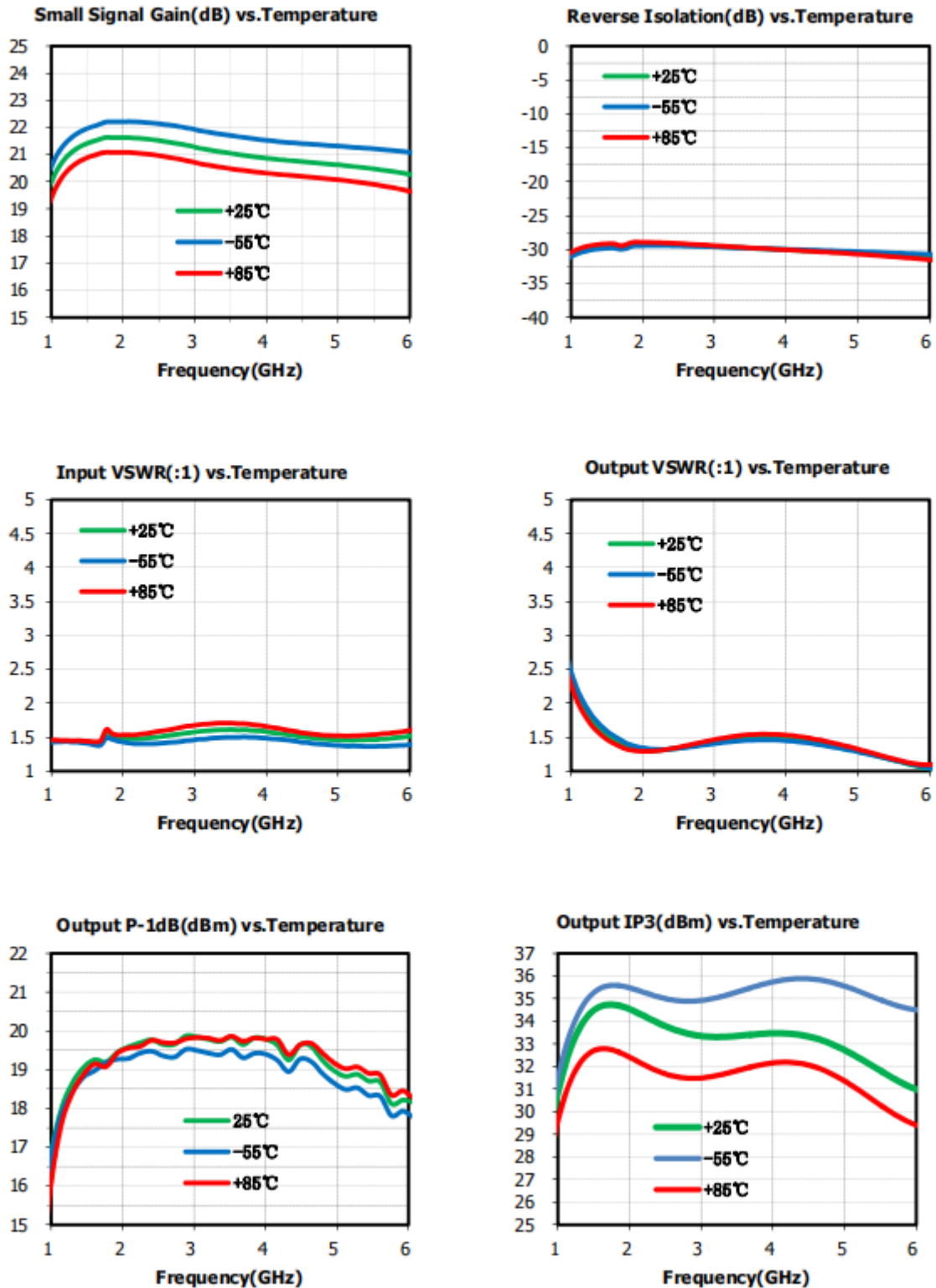


GaAs MMIC Low Noise Amplifier  
3.5~6GHz

Rev 1.0

## Typical Performance Curve

$V_D=+5V, I_{DQ}=65mA$



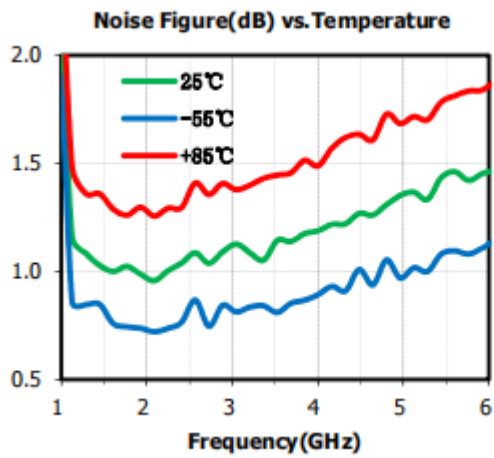
### SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA  
Tel: 1-847-505-8319, 1-847-573-9866  
E-mail: sales@superapexco.com  
Website: www.superapexco.com

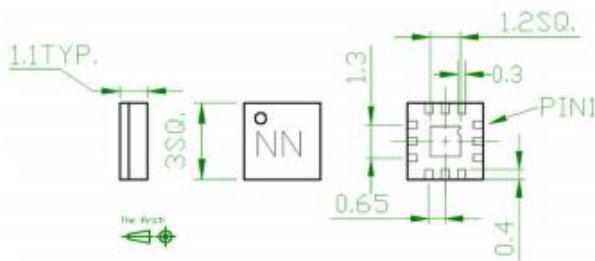
# SAC3034AQ3

GaAs MMIC Low Noise Amplifier  
3.5~6GHz

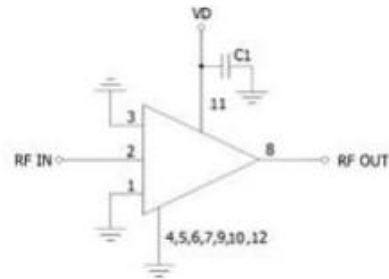
Rev 1.0



## Outline Drawing (All dimensions in mm)



## Assembly Circuit



## Pin Function

Pin No.	Description	Pin No.	Description
1	Connect to ground	7	Connect to ground
2	RF input, AC coupled	8	RF output, AC coupled
3	Connect to ground	9	Connect to ground
4	Connect to ground	10	NC or connect to ground
5	Connect to ground	11	Drain(V <sub>D</sub> )
6	Connect to ground	12	NC or connect to ground

### Attention:

1. The moisture resistant grade of products is 2a, the storage environment  $\leq 30^{\circ}\text{C}/60\% \text{RH}$ , The surrounding workshop life is 4 weeks.
2. After un-packing, It is necessary to bake the parts for 6 hours in  $125\pm 5$  degree environment before soldering.